

AN ADDITIVE TO RENDER GYPSUM BOARD MOISTURE RESISTANT

ABSTRACT OF THE DISCLOSURE

Waxes prepared from hydrogenated plant oils, such as palm and soybean, are used to render gypsum board resistant to water. Unlike petroleum-derived waxes used for the same purpose, vegetable derived waxes are renewable and readily converted into forms such as emulsions or powder that facilitate incorporation into gypsum board manufacturing. Such water resistant materials are characterized by enhanced moisture barrier properties. The compositions have a low iodine value (between 2-5), and melting points between approximately 120-185 degrees F (Mettler Drop Point). The wax comprises a triglyceride whose fatty acids are predominantly stearic acid (C₁₈). The composition is used as an additive in the manufacture of water resistant gypsum board.